Message

From: Greene, Nikia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=32A08A414A4F40199B557C0819EB7D0B-GREENE, NIKIA]
Sent: 12/10/2019 1:25:57 PM
To: Wall, Dan [wall.dan@epa.gov]; Vranka, Joe [vranka.joe@epa.gov]
CC: Partridge, Charles [Partridge.Charles@epa.gov]; Barnicoat, Dana [Barnicoat.Dana@epa.gov]
BCC: Lynn Woodbury [woodburyl@cdmsmith.com]
Subject: FW: Pointed Reaction to Last Evening's Health Study Working Group Meeting

FYI

Nikia Greene
Remedial Project Manager
U.S. EPA, Region 8
(406)-457-5019
greene.nikia@epa.gov

From: John Ray **Ex. 6 Personal Privacy (PP)**
Sent: Tuesday, December 10, 2019 6:02 AM

Ex. 6 PP Public Involvement Advisory Group

Subject: Pointed Reaction to Last Evening's Health Study Working Group Meeting

Delays have dangerous ends. Shakespeare

I largely listened at last evening's Health Study Working Group meeting.

Certainly, there is need for further study of Professor Hailer's and McDermott's data and inferences. (I must say I know Professor Hailer and she has unquestionable integrity and ability.) Every study gives rise it seems for the need for further study. To paraphrase from another context: "Study begets study as dog begets dog." It is never ending. But the potential health harms from manganese, zinc and copper in infants is a current issue that needs to be addressed now; not five years or seven years from now in another study. If harms are happening, we need remediation now. We need to address what Dr. King, in another context called the "fierce urgency of now." People are upset and concerned about whether or not Superfund has worked, and more

importantly, in terms of environmental contaminants, is Butte a safe place to live. We are bombarded with contradictory studies and responses to those studies.

To that end, I would suggest the following immediate and practical questions and steps.

1. In terms of manganese, zinc and copper in newborns, what are the possible sources of contamination? How could they have been exposed? Have these three contaminants been investigated during the initial phases of Superfund in Butte? If so, what were the results? Are these results still valid? Do we need to reassess the results? I call upon EPA and its "partner" MDEQ to answer this question.

2. The contaminants of human health concern for Superfund in Butte are primarily arsenic, lead and mercury. Why were these the one's chosen? Why were zinc, manganese and copper excluded? Lead, arsenic and mercury have been the driver. Was this a correct decision? Do we need to revisit that decision? RMAP said last evening that they have not analyzed for zinc, copper or manganese. Should they do so now?

3. It **WAS** strongly intimated in initial reports about the Hailer study that the rout of exposure was airborne. Is this still the case? Air quality issues in Butte have not played much of a role, if any, in driving the cleanup. Why? On what basis? Do we need to revisit this?

4. How do you separate the potentially harmful effects from past mining activity from the potentially harmful effects of present mining? Regulation of present mining is focused in MDEQ. Superfund is a federal program. How do we achieve a unified approach?

5. Quickly we need an answer to the issue: ARE BUTTE INFANT RESULTS WITHIN THE NORMAL RANGE OR ARE THEY OUTSIDE THE NORMAL RANGE FOR ZINC, COPPER AND MANGANESE? Last evening's meeting said they are within the normal range or slightly above the normal. Professor hailer makes a case for much higher? We need an answer, now.

6. I have looked at several meconium studies in Canada, Southeast Asia, etc. and have gleaned that there are many potential causes and sources of meconium contamination (If there is a problem, what is the cause or source?):

   a. Diet (Could the Butte situation be a nutritional issue?)

   b. Smoking

   c. Water pipes

   d. De-icing materials used on winter streets.

e. Motor vehicle exhaust.

f. Working with brakes.

g. Pesticides and fungicides.

h. Wood smoke

i. Used motor oil

j. Paint

7. Notwithstanding number 6, active copper mining stands out as a potential source, which brings us back to the need to know what is going on now.

8. What are the routes of transfer from existing zinc, manganese or copper contamination to baby's stools?

9. *A potential read flag was raised for me last evening that I want to check out: I heard Dr. Hailer say that she had informed the agencies of her data back in March. Did I hear this correctly? This is December—8 months ago. Why, if I heard correctly, did EPA and the other informed agencies "sit on this data" until the study broke in the paper?*

10. In addressing these potential new contaminants of concern, how will environmental justice be addressed?

11. If there is found to be a problem emanating from zinc, manganese and copper in terms of human health, how, given the late stage of Superfund in Butte, will these be addressed and mitigated? Will we need to reopen the consent decree? What and how?

12. How will these contaminants be addressed in terms of the "Flat?"

I could suggest more than the twelve above. But we need to let the precautionary principle guide us: Even if data is incomplete, that does not obviate the need for action to protect human health. Certainly, the BSB Health Department needs to be involved. Under Karen's direction, it is competent and pro-active.ARCO has been very forthcoming. I hope this does not become an adversarial process but that we can work together for the common good.

Going forward, I hope we spend more time, not on trying to defend in an ossified way previous positions but by being open to new data and inferences. As Lincoln said: "The time has come to think anew and act anew. We must disenthrall ourselves."

The public needs to be informed about what the h… is going on with regard to public health and environmental toxics in Butte. Confusion, alarm, mistrust, recrimination and

paralysis of analysis are at the forefront. Let us not forget the need to act. If there is a problem, identify it and fix it? If there is not a problem, substantiate that claim to allay public fear.

Finally, using the precautionary principle, are we missing anything that we could be doing to improve the cleanup? Do we need more public education about how to protect oneself and one's family from the toxics left in place? Do we need more protocols for remediation? What? If we have missed something, we can identify that now and don't need to wait for more studies. Let us avoid the dangerous ends of endless delay, recrimination and inaction.

Dr. John W. Ray